



Products & Services

November 2021

View some of our current projects...



Total Learning
Architecture (TLA)
Reference Implementation



ADL in Exercises
(MADLx)



cmi5 Player
and Test Suite



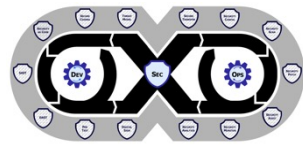
Data Simulator for TLA
(DATASIM)



Enterprise
Course Catalog (ECC)



Enterprise Learner
Record Repository (ELRR)



DevSecOps/Learning
Technology Warehouse



PERvasive Learning
System (PERLS)



xAPI Profile
Server



xAPI RMF Accreditation
Project (xRAP)

Total Learning Architecture (TLA)

Reference Implementation

The TLA Reference Implementation enables DoD stakeholders to test, evaluate, or stand up their own TLA sandbox implementations in order to expose TLA data so that it may be shared across components and organizations. The TLA Reference Implementation replicates key functionality that typically resides in a Learning Management System (LMS), e.g., student registration, student tracking, content presentation, performance tracking, etc. that are necessary for learning environment. This continuously evolving framework of software components is designed and built to process large volumes of data from connected learning activities and core TLA systems.

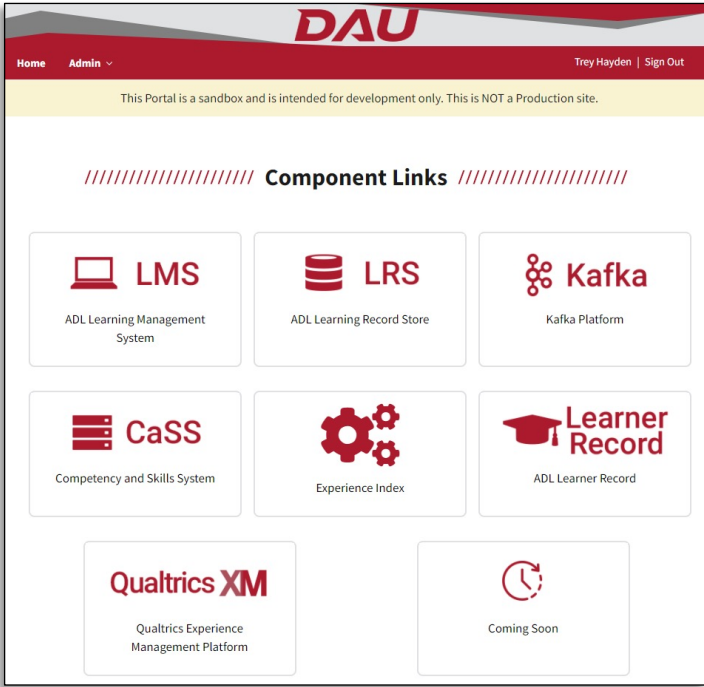
PROGRESS TO DATE

- Updated 2021 Reference Implementation matures key components and interfaces
- TLA Quick Start Guide provides detailed instructions on setup and configuration.
- Updated components via integration with the ADL's DevSecOps pipeline

OPPORTUNITIES

- Schedule a demo by emailing support@adlnet.gov
- Review the components on GitHub: <https://github.com/adlnet>

UP NEXT					
September 2021		December 2021		March 2022	
Multiple LRS/LMS solutions xAPI Graphing Research		ECC / Experience Index Policy-Based Access Control		Parity with the DoD Learning Enclave	
	Project Page https://adlnet.gov/projects/tla/		Webinar https://adlnet.gov/webinars/20210217-DAU-Sandbox-Walkthrough-and-Demo/		GitHub https://github.com/adlnet



ADL in Exercises (MADLx)

Enhances joint and coalition training exercises by integrating distributed learning with computer-based and live training exercises. The benefits of this integration include improved learning outcomes, increased learning efficiency through improved convenience of instructional materials, and expanded readiness reporting through advanced learning analytics and their visualizations. In addition to these technical outcomes, this effort seeks to strengthen partnership relationships by executing case studies in collaboration with coalition military organizations.

PROGRESS TO DATE

- Completed seven diverse field trials: US and multinational; CAX and LIVEX; Tactical and Operational
- Cooperation with JSJ7 cascades project deliverables to Joint Staff and CCMD
- Best Practices encoded into NATO ADL Handbook

OPPORTUNITIES

- Inquire about joint exercise participation
- Download MADLx reports from ADLnet.gov to access past exercise findings and recommendations
- Participate in case studies

UP NEXT		
October 2021	October 2021	April 2022
Bold Quest 21.2	Bold Quest 21.2	Viking

	Project Page https://www.adlnet.gov/projects/madlx/		Website https://madlx.org
	Webinar https://youtu.be/eGkr2Dw64JY		Article https://www.adlnet.gov/news/2020/12/22/MADLx-Supports-Field-Testing-for-Distributed-Learning-Technologies/



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cmi5 Player and Test Suite

A freely available, open-source cmi5 content player and conformance test suite for use by DoD stakeholders and e-learning technology vendors. Exemplar DoD courses, along with templates and instructions, are being developed to help DoD organizations convert legacy courseware into the cmi5 specification, and transition e-learning systems and tools toward an integrated enterprise-wide learning ecosystem.

PROGRESS TO DATE

- cmi5 Player Software Delivered
- Demos and Drafts of the cmi5 Course Templates and Best Practices Guides
- Verification and Testing by ADL, Designated Stakeholder Representatives, and the cmi5 Working Group

OPPORTUNITIES

- Join the cmi5 Working Group (link below)
- Inquire for early access to the Player and Test Suite
- Provide an exemplar course to be "cmi5-ified"

UP NEXT		
2022	2022	2022
cmi5 Use at TLA Plugfest	Assist DoD with cmi5 Implementations	ADL Hosted cmi5 Adopters

	Project Page https://www.adlnet.gov/projects/cmi5-CATAPULT/		GitHub https://github.com/ADL-AICC/cmi5
	Webinar https://youtu.be/E_pG3acD1sk		Working Group https://www.adlnet.gov/working-groups/cmi5-xapi-profile/

catapult Home			
Courses			
Show	all courses	Search...	Courses per page 10
Title	Test Result	Last Tested	Action
Ating Alamin	✓ Conformant	2 months ago	Test
Bambusa bambos	✓ Conformant	11 months ago	Test
Beardsly meteorite	✗ Non-conformant	10 days ago	Test
CARNet	? Result Pending	Never	Test
Crookston, Minnesota	✗ Non-conformant	6 hours ago	Test
Dean of Lincoln	✗ Non-conformant	14 hours ago	Test
Dyspessa fantoli	✓ Conformant	1 year ago	Test
Forestia	✓ Conformant	2 months ago	Test
Geology	? Result Pending	1 day ago	Test
Introduction to Geology	? Result Pending	Never	Test

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Data Simulator for TLA (DATASIM)

Provides the ability to model a learner population and generate a subsequent xAPI dataset based on the simulated activity of that learner population at any specified scale. It is the essential Testing and Evaluation application supporting the development of xAPI Profile design, xAPI-instrumented activities, and the benchmarking and stress testing of xAPI-enabled technologies across the Total Learning Architecture.

PROGRESS TO DATE

- TRL5 beta software available as open-source publicly on GitHub
- Distributed generation of xAPI statements; millions of statements in minutes on average hardware
- xAPI Profile validation capabilities

OPPORTUNITIES

- Use DATASIM to validate your own xAPI Profiles
- Help the ADL Initiative with further development

RESOURCES



Project Page

<https://adlnet.gov/projects/datasim/>



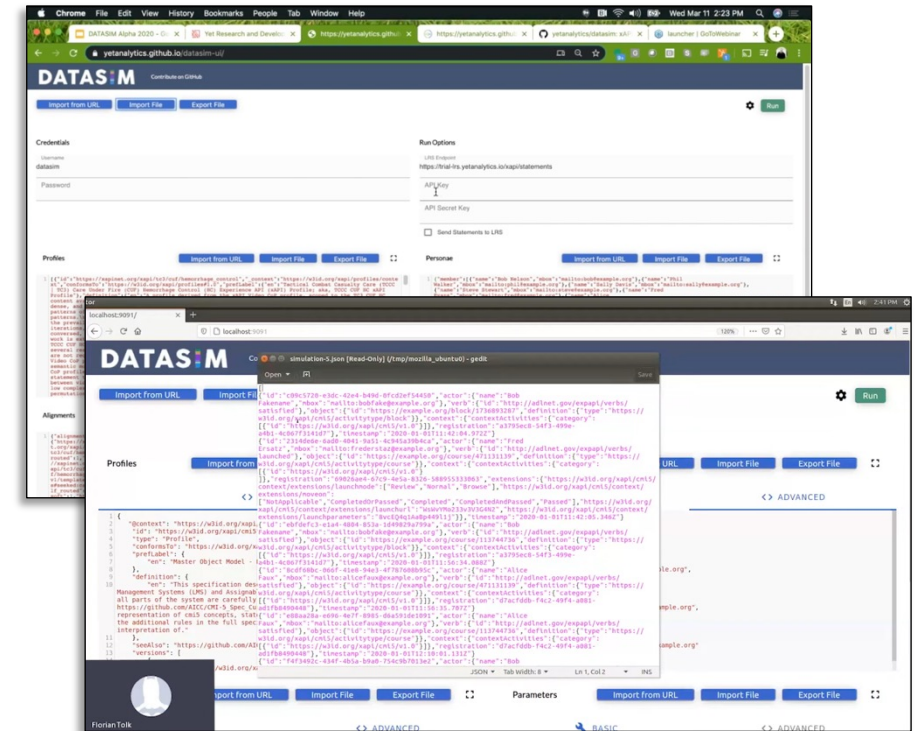
Webinar

<https://youtu.be/6pfZ6dH5LHw>



GitHub

<https://github.com/yetanalytics/datasim>



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Enterprise Course Catalog (ECC)

Develop a global search capability that pulls information from decentralized local catalogs across the DoD and aggregates the content into a single, Defense-wide portal. This project includes support to the IEEE's P2881 Standard for Learning Metadata Working Group, data engineering for the architecture, development of microservices that aggregate metadata from disparate connected systems into the standard format, and creation of a unified portal, hosted by USALearning.

PROGRESS TO DATE

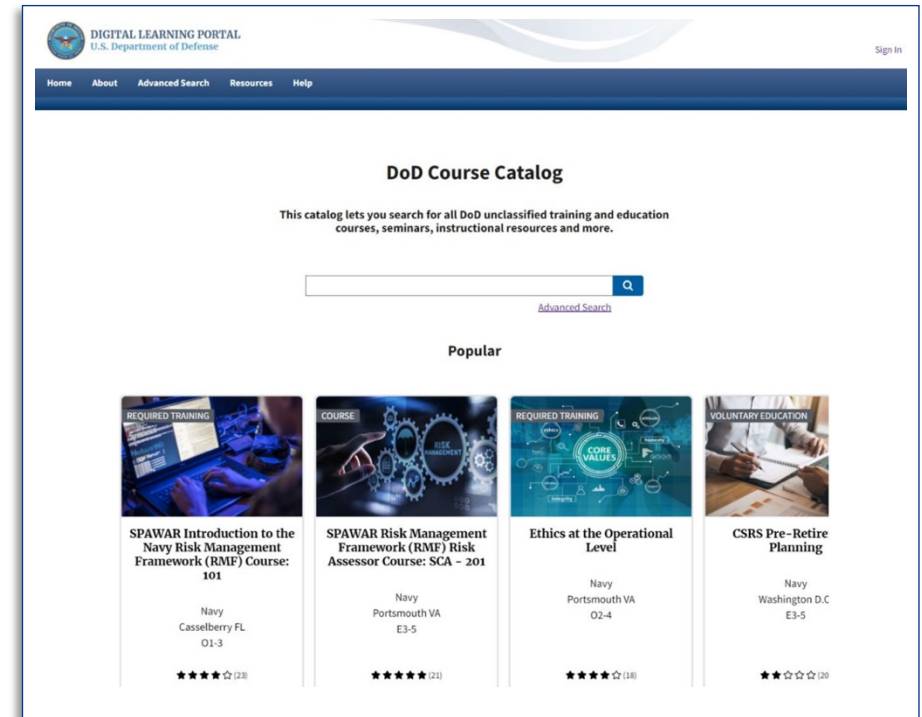
- Established the Open Source ECC code repository on GitHub: <https://github.com/OpenLXP>
- Completed initial Operational Testing with DoD stakeholders using local course catalogs
- Developed an Infrastructure as Code DevOps pipeline for fast deployment across various development and test environments

OPPORTUNITIES

- Join the Standard Working Group (link below)
- Support ECC by getting your own course catalogs integrated into the ECC
- Support Operational Testing

UP NEXT		
September 2021	December 2021	March 2021
ECC MVP operational testing complete	Integration into Platform One	Initial Certificate to Field (targeted) for IL4 environment

	Project Page https://adlnet.gov/projects/ecc		Article https://adlnet.gov/news/2021/02/02/Enterprise-Course-Catalog-Update/
	Webinar https://youtu.be/kZ2s_d8Ku33A		Working Group https://standards.ieee.org/project/2881.html



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Enterprise Learner Record Repository (ELRR)

Enables the sharing of local and global learner data across the DoD. This learner data will be obtained from authoritative sources for publishing, customizing, and harmonizing individual profiles, performance records, and training records. Once launched, personnel can access their training records throughout their learning journey at DoD and use this information to ensure they have the skills and credentials required for their career path.



PROGRESS TO DATE

- Migrating ELRR source code to the Platform One code repo
- Begin execution of option year PWS to harden and mature the MVP.
- Learner API and a Local Learner Profile made available to DoD stakeholders.
- IEEE P2997 Standard for Enterprise Learner Records Working Group established / PAR approved.

OPPORTUNITIES

- Join the Standard Working Group (link below)
- Support ELRR maturation and hardening
- Test in the sandbox

UP NEXT

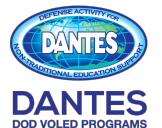
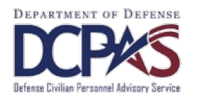
September 2021	December 2021	March 2022
MVP Prototype development complete	MVP hardening / Migration to Platform One complete	Migration to a Graph Database
	Project Page https://adlnet.gov/projects/elrr/	
		Working Group P2997 - Standard for Enterprise Learner Record (ieee.org)



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Deloitte.

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DevSecOps/L-Tech Warehouse






The ADL Initiative established a DevSecOps Pipeline to ensure that interoperability and data security requirements are baked in throughout the development process of its R&D projects. This pipeline includes a development and testing environment, the [TLA Sandbox](#), used by DoD organizations to explore the [TLA specification](#) or test products for compliance. There is also a user-friendly portal on the pipeline, to help DoD users access software, while ensuring quality (e.g., security benchmarks, complete documentation) and leveraging individual organization investments across the DoD—saving substantial time and resources.

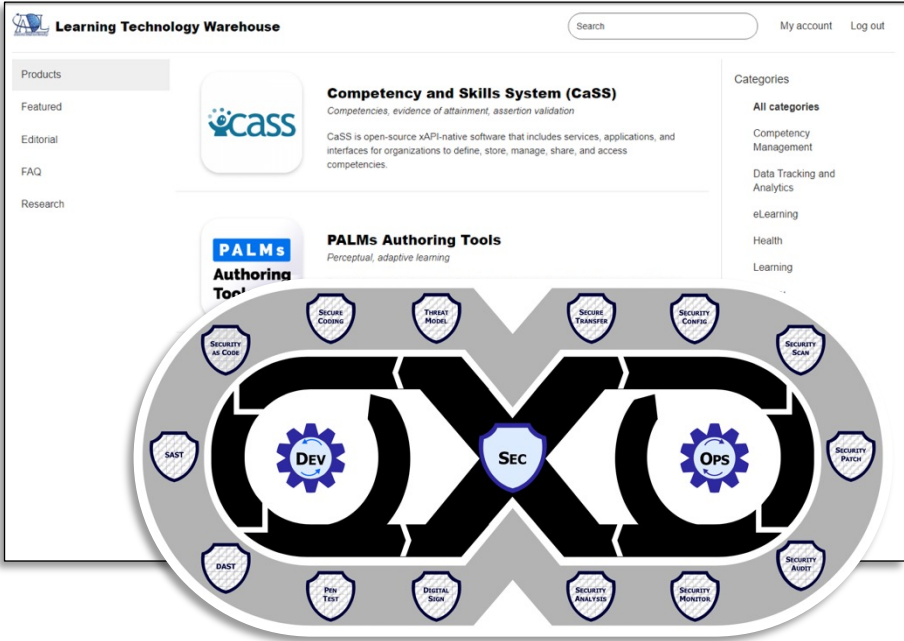
PROGRESS TO DATE

- Extended the DevSecOps process to all ADL Initiative projects
- Maturing the DevSecOps pipeline to enable ATO and enhance scalability

OPPORTUNITIES

- Create a Learning Technology Warehouse account (Link below)
- Identify vetted products for your distributed learning programs

UP NEXT				
Decmber 2021	January 2021		February 2021	
Start DSO Migration to Platform 1	Continue maturation of DevSecOps process for scalability and adoption for products across DoD		Incorporate other DOD products and technologies into the LTW portal	
				
Project Page https://adnet.gov/projects/learning-technology-warehouse/	TLA Sandbox https://adnet.gov/news/2020/01/20/ADL-Initiative-established-a-TLA-Sandbox-project/	TLA Specification https://adnet.gov/projects/ta/	Learning Technology Warehouse https://adnet.gov/resources/learning-technology-warehouse-portal/	Article https://www.adnet.gov/news/2021/01/05/DevSecOps-and-Preparing-the-PeBL-eBook-Platform-for-DoD-Wide-Use/



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PERvasive Learning System (PERLS)



A mobile-based microlearning platform that uses short-term strategies specifically designed for skills-based learning anytime and anywhere, taking advantage of unplanned time during a learner’s daily schedule to enhance and reinforce learning. The learner is empowered to select the learning content that they need, when and where they have time—leading to increased exposure (i.e., time on task) to learning content. This leads to improved training outcomes, greater personnel readiness, and improved training sustainment.

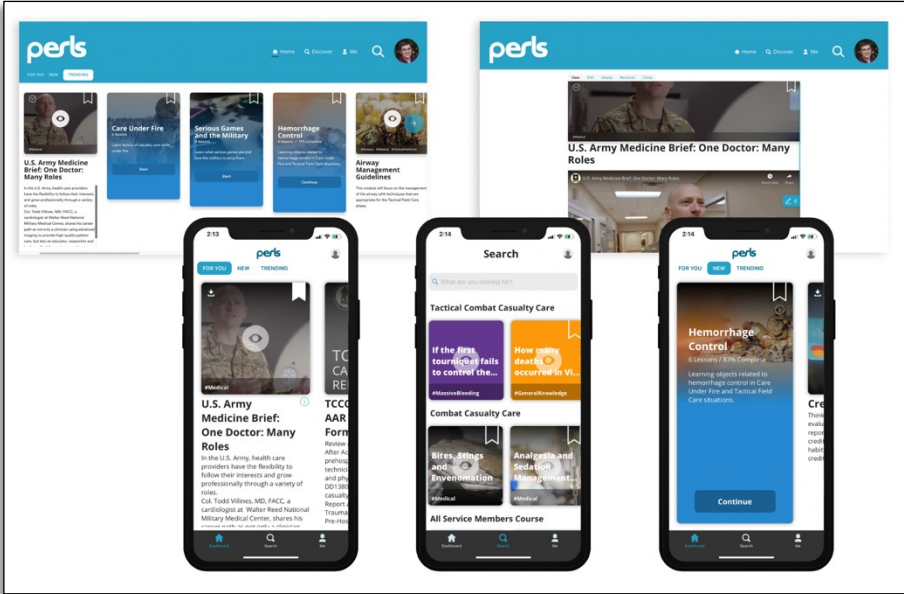
PROGRESS TO DATE

- Development: PERLS v2.8 deployed
- Verification, Validation, & Evaluation: Learning impacts experiment underway with support from the Army Air Assault School at Fort Campbell, KY
- Transition: Accreditation and transition to Platform One to IL4 environment underway

OPPORTUNITIES

- Mature PERLS features
- Expand PERLS user organizations
- Increase PERLS content repository

UP NEXT			
December 2021	January 2022	February 2022	
Finishing up data collection and begin data analysis and findings for learning impact experiment	PERLS v2.9 will be completed	Accreditation and transition to Platform One to IL4 environment continuing	
	Project Page https://adlnet.gov/projects/perls/		PERLS Demo Video https://youtu.be/Taig2B-2L0o



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 Arizona State University			
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xAPI Profile Server





A prototype xAPI Profile Server designed to provide a streamlined approach for creating, validating, managing, and modifying profiles in support of widespread xAPI adoption across DoD. The prototype capability includes discovery services and authoring tools. Ultimately, these are meant to enable a clearinghouse of xAPI Profiles, shared vocabularies, and activity identifiers. DoD organizations can use the Profile Server to find and modify xAPI Profiles specific to their unique needs. With the prototype delivered, current efforts are being made to increase functionality, use among DoD, and transitionability.

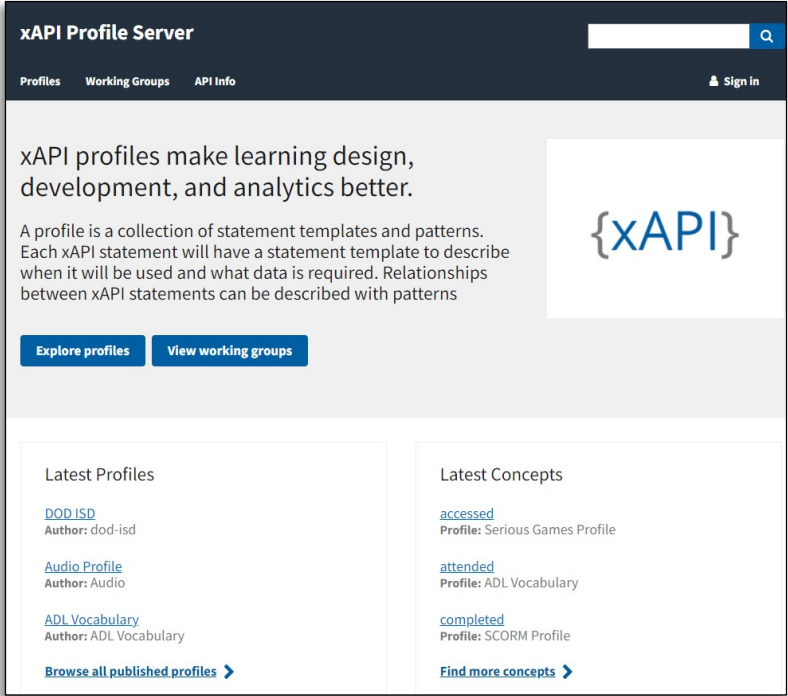
PROGRESS TO DATE

- Profile Server Software and Documentation Delivered
- Software Deployed to <https://profiles.usalearning.net/> (usability improvements)
- Profile Server Webinar July 2021 (focuses on improvements and benefits)

OPPORTUNITIES

- Join the Profile Specification IEEE Working Group (link below)
- Express interest in use cases solved by a new profile
- Join an xAPI Profile Working Group formed around a particular use case

UP NEXT			
December 2021	January 2021	April 2022	
Phase I Improvements Done	DoD Working Groups	Stakeholder Engagement/New Requirements Report	
	Project Page https://adlnet.gov/projects/xapi-profile-server/		Working Group https://sagroups.ieee.org/9274-1-1/
	Webinar https://youtu.be/6pfZ6dH5LHw		USA Learning https://profiles.usalearning.net/



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xAPI RMF Accreditation Project (xRAP)

Provides approachable guidance, tools, and resources in support of cybersecurity accrediting an xAPI based learning and training systems, with the objective of increasing the number of xAPI based systems that can share data. This project makes available a list of changes between the currently common xAPI 1.0.3 and the "xAPI 2.0", being adopted by the Institute of Electrical and Electronics Engineers (IEEE) as standard 9274.1.1.

PROGRESS TO DATE

- Accreditation support tool reviewed by stakeholders and delivered
- ADL Initiative determining best option for dissemination to stakeholder community
- Change log of differences between xAPI 1.0.3 and IEEE 9274.1.1

OPPORTUNITIES

- Share lessons learned and tips for implementing xAPI in accredited systems
- Prepare xAPI-based systems for conformance with IEEE 9274.1.1
- Read upcoming ADL Initiative publication on xRAP

RESOURCES



Project Page

<https://adlnet.gov/projects/xapi-rmf-accreditation-project-xrap/>



Final Project Report

<https://adlnet.gov/publications/2021/07/adl-xapi-rmf-accreditation-project-final-report/>

2. Should * Breaking Changes

ID	1.0.3 Section	1.0.3 Text	9274.1.1 Section	9274.1.1. Text or Description
s1	Section 2.2	Additional properties SHOULD* NOT be added to Statements unless explicitly allowed by this specification.	Section 5.2.1	An LRP SHALL not add additional properties to Statements
s2	Section 2.2	Additional properties SHOULD* NOT be added to Statements and other objects unless explicitly allowed by this specification and the LRS SHOULD* reject Statements containing such additional properties.	Section 5.2.1	An LRP SHALL not add additional properties to Statements
s3	Section 2.2	Additional properties SHOULD* NOT be added to Statements and other objects unless explicitly allowed by this specification and the LRS SHOULD* reject Statements containing such	Section 4.2.1	An LRS shall reject a Statement with additional properties other than extensions in the locations where extensions are allowed

1. General Updates

ID	1.0.3 Description	9274.1.1 Updated Description
g1	<p>The specification organized into several markdown files primarily comprising the following sections</p> <ul style="list-style-type: none">• Part One: About the Experience API Overall information about the xAPI• Part Two: Experience API Data xAPI JSON data formats and associated information• Part Three: Data Processing, Validation, and Security xAPI Resources/Endpoint description, validation and security considerations <p>Requirements for LRS, LRP, and LRCs are included in Part Two and Part Three.</p>	<p>The standard is organized into several markdown files</p> <ul style="list-style-type: none">• 9274.1.1 xAPI Base Standard Front Matter IEEE required front matter materials and detailed standard table of contents• 9274.1.1 xAPI Base Standard Authors IEEE xAPI working group xAPI authors• 9274.1.1 xAPI Base Standard Contributors IEEE xAPI working group individual contributors• 9274.1.1 xAPI Base Standard Acknowledgements Additional acknowledgments beyond the current IEEE xAPI working group• 9274.1.1 xAPI Base Standard Overview Overall information about the xAPI• 9274.1.1 xAPI Base Standard LRSs Normative information for LRSs• 9274.1.1 xAPI Base Standard Content

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Questions?

support@ADLnet.gov